

IN THE CLAIMS:

In accordance with the Revised Rules under 37 C.F.R. 1.121, please amend the claims as shown below and indicated as “currently amended.” Also shown below are claims that may be original, cancelled, withdrawn, previously presented, new, and not entered.

1. (Currently Amended) A rotary displacement machine with radial pistons; rotary displacement machine, comprising:

- a supporting structure, with a main body and a cover;
- a centrally mounted distributor;
- a rotating unit ~~consisting of~~ comprising a rotor provided with a number of radially extending cylindrical chambers, wherein each chamber contains a respective piston mounted for sliding movement in a first direction along a first axis coaxial with the longitudinal centerline of the respective cylindrical chamber; and
- means of ~~buckling~~ opposing the radial thrust from the pistons, said means forming a bearing in combination with an inner thrust ring;

~~— the rotary displacement machine being characterized in that:~~

~~- said the bearing comprises comprising the~~ a rotating inner ring, a stationary outer ring, and intervening rolling means, ~~said the~~ rotating inner ring including sliding engagement means for each piston, ~~said the~~ engagement means allowing movement in a straight line along a first direction defined by a second axis perpendicular to ~~said the~~ first axis, wherein the engagement means comprise a slide rail attached to the inner ring, and a slide attached to the head of the piston, the slide being a flat slide, so that the relative paths of movement of the slide and the slide rail are straight paths of movement along the second axis.

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) A rotary displacement machine as claimed in Claim 1, wherein the force of the piston is transferred to the ~~thrust~~ inner ring through a hydraulically balanced end

surface.

5. (Previously Presented) A rotary displacement machine as claimed in Claim 1, wherein at least one of said pistons is provided with a closed seal ring.

6. (Currently Amended) A rotary displacement machine as claimed in ~~any of the preceding claims~~ claim 1, wherein at least one of ~~said the~~ pistons is facing ~~said the~~ distributor with a face shaped to fill unwanted clearance.

7. (Previously Presented) A rotary displacement machine as claimed in Claim 1, wherein at least one piston is formed with at least one lightening hole.

8. (Previously Presented) A rotary displacement machine as claimed in Claim 7, wherein the longitudinal axis of said hole extends transverse to the first axis of the piston and does not cross a hydraulic balancing hole formed in the piston.

9. (Currently Amended) A rotary displacement machine as claimed in Claim ~~3~~ 1, wherein one of ~~said the~~ pistons ~~locates fully inside~~ is located entirely within the respective radial cylindrical chamber, and at least a portion of ~~said the~~ slide rail ~~locates inside said~~ is located within the radial cylindrical chamber.

10. (Currently Amended) A rotary displacement machine as claimed in Claim ~~4~~ 17, wherein at least one of ~~said the~~ bearings is an integral bearing.

11. (Currently Amended) A rotary displacement machine as claimed in Claim ~~3~~ 1, wherein the inner ring has advantageously a sinusoidal shape, such that it can accommodate two sets of rolling bodies in two side races, they being placed on one side of ~~said the~~ slide rail.

12. (Currently Amended) A rotary displacement machine as claimed in Claim ~~10~~ 17, wherein at least one of ~~said the~~ bearings mounts an unsplit disk cage.

13. (Previously Presented) A rotary displacement machine as claimed in Claim 12, wherein each unsplit disk cage is mounted peripherally of the respective set of rolling bodies.

14. (Currently Amended) A rotary displacement machine as claimed in Claim ~~10~~ 17, wherein at least one of ~~said the~~ bearings mounts a plurality of rolling bodies in interference fit

relationship.

15. (Currently Amended) A rotary displacement machine as claimed in Claim 1, wherein said rotor and ~~thrust~~ inner ring are controlled to rotate synchronously by a synchronization device.

16. (Previously Presented) A rotary displacement machine as claimed in Claim 15, wherein said synchronization device is a cross coupling.

17. (Currently Amended) A rotary displacement machine as claimed in Claim 1, wherein said rotor is mounted by bearings in the main body and cover and said the distributor is mounted floating in the portion carrying a cover to float within a space defined by the cover and is held in a coaxial relationship in the rotor by bearing means.

18. (Previously Presented) A rotary displacement machine as claimed in Claim 17, wherein the placement of said distributor can be adjusted both angularly and axially along a longitudinal centerline.

19. (Previously Presented) A rotary displacement machine as claimed in Claim 17, wherein at least a surface portions of the distributor and the surface portions of a recess provided on the rotor have a conical shape allowing said surface portions to fit together in different ways.

20. (Currently Amended) A rotary displacement machine as claimed in Claim 17, wherein seal rings of metal are arranged to stop oil from leaking through the clearance gap between the outer surface of the distributor and the surface of ~~a hole~~ an opening in said the cover.

21. (Currently Amended) A rotary displacement machine as claimed in Claim 20, wherein said the seal rings are received each in a respective annular seat formed in the surface of said ~~hole~~ the opening formed in the cover.

22. (Currently Amended) A rotary displacement machine as claimed in Claim ~~1~~ 17, wherein said the cover carries an intake device and a discharge device, ~~said the~~ said intake and discharge devices being each formed with a respective offset groove from a centerline of the distributor.

23. (Currently Amended) A rotary displacement machine ~~with radial pistons; rotary displacement machine comprising:~~
~~-a supporting structure;~~

- a centrally mounted distributor;
- a rotating unit consisting of a rotor provided with a number of radially extending cylindrical chambers, wherein each chamber contains a respective piston mounted for sliding movement in a first direction along a first axis coaxial with the longitudinal centreline of the respective cylindrical chamber; and
- means of bucking the radial thrust from the pistons, said means forming a bearing in combination with a thrust ring;
- the rotary displacement machine being characterized in that: said distributor is mounted floating in a cover carrying portion as claimed in claim 1, wherein one of the pistons is located entirely within the respective radial cylindrical chamber, at least a portion of the slide rail is located within the radial cylindrical chamber.

24. (Currently Amended) A rotary displacement machine as claimed in ~~Claims 1~~ Claim 17, wherein at least one of the bearings for the rotor and/or for coupling the inner and outer rings together provides frictional drag in which sliding means are provided which comprise at least one layer of an anti-friction plastics material bonded, through an additional layer of a porous metal, to one of the contacting parts or another intervening metal element.

25. (Currently Amended) A rotary displacement machine as claimed in Claim 1, wherein ~~said~~ the rotor has a nitrided surface in the area of coupling to ~~said~~ the distributor.

26. (Cancelled)

27. (New) A rotary displacement machine as claimed in Claim 22, wherein between the surface of the opening in the cover in which the distributor is mounted and the outer surface of the distributor are provided seal rings at either ends of the intake and discharge devices.